## **CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**International General Certificate of Secondary Education** 

## MARK SCHEME for the October/November 2012 series

## 0625 PHYSICS

0625/63

Paper 6 (Alternative to Practical), maximum raw mark 40

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



Page 2		2	Mark Scheme	Syllabus	Paper		
			IGCSE – October/November 2012	0625	63		
1	(a) (i)	and (i	$l_0 = 2.0 \text{ and } l_1 = 6.1$		[1]		
	(iii)	e <sub>1</sub> =	4.1cm unit required ecf from 1(a)(i) and 1(a)(ii)		[1]		
	(iv)		ect calculation for $k = 24/24.4$ ecf from <b>1(a)(iii)</b> g/cm		[1] [1]		
	(b) (i)		ropriate method (can be written and/or in diagram) measure half width of mass either side of 40 cm/ma	ı <u>rk</u> centre of mass	[1]		
	(ii)	and <b>(</b> i	iii) $e_2$ seen and $M = 190$ g (no ecf) unit required for 2 or 3 significant figures	or M	[1] [1]		
	(c) Any two from: rule bends mass not exactly at 40 cm mass may slip end of rule may slip hook not directly above 0 cm spring extension not uniform/owtte proportional limit exceeded mass irregular/C of G not at centre						
2	(a) 23 seen in correct place in table				[1]		
	(b) (i)	Units	s <u>all</u> correct (symbols or words)		[1]		
	(ii)	10°C	C (or ecf from <b>2(a)</b> ) and 23°C		[1]		
	(iii)		ement matching temperature changes (expect 'blac parative comment	k') with supporting	[1]		
	(iv)	<u>Figu</u>	ement matching results (expect 'Yes') res from table matching correct statement time interval mentioned at least once		[1] [1]		

r age 3		IGCSE – October/November 2012	0625	63	
(c)	same (ty same dis same (ty same and same thi good con same sta allow land Appropri power or different respond different different	Any one from: ame (type of) lamp/same brightness ame distance/height ame (type of) thermometer ame area of card ame thickness of card good contact between card and thermometer (owtte) ame start temperature/allow thermometer to cool allow lamp to cool  Appropriate matching explanation: bower output may not be the same (owtte) lifferent intensity of radiation (owtte) espond differently/different heat capacity lifferent surface area to absorb radiant heat (owtte) lifferent rate of conduction (owtte)			
		se different at different temperatures starts at different times		[1]	
	J			[Total: 8]	
				[]	
3 (a)		symbol for voltmeter el with lamp		[1] [1]	
(b)	(i) Unit	s all correct		[1]	
		alues correct (10, 14, 18, 21) sistent 2 or 3 significant figures in R column		[1] [1]	
(c)	R figures	nt matches results (expect 'No') s quoted appropriately and matching statement of brightness related to temperature		[1] [1]	
				[Total: 8]	
4 (a)	(i) and (i	i) $u = 7.0 \text{ cm} \text{ and } v = 5.2 \text{ cm}$ (or equivalent in mm	))	[1]	
	(iii) <i>u</i> = 0	0.350 <u>and</u> <i>v</i> = 0.260 in table (ecf) <u>to 3 sf</u>		[1]	
(b)	Correct	$\frac{1}{u}$ (2.86(ecf)) and $\frac{1}{v}$ (1.67, 2.55, 3.85 (ecf), 4.50, 5	.10 )	[1]	
(c)	Plots cor Well judg	relled (including units) and appropriate scales rect to ½ small square ged straight line and small plots		[1] [1] [1]	

Mark Scheme

Syllabus

Paper

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Р	age 4	Mark Scheme	Syllabus	Paper	
		IGCSE – October/November 2012	0625	63	
(d	) (i) and (ii	p and $q$ values there and matching graph		[1]	
(e)	) (i) and (ii	f within range 0.145 to 0.155 2 or 3 significant figures <u>and</u> appropriate unit		[1] [1]	
				[Total: 10]	
5 (a)	,		[1]		
	Add rema	[1]			
(b	) 75 <u>%</u>		[4]		
(u)	) 73 <u>76</u>		[1]		
(c)	Greater t		[1]		
` '	Height of release less but bounces to same height (owtte)				
				[Total: 5]	